

## 2

# When the Digging is Over: Some Observations on Methods of Interpreting Archaeological Sites for the Public

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### 2.1. Historic St. Mary's City

Archaeological findings can be presented to the public in many ways. Some involve lectures, exhibits, and publications that are not physically connected with the site, while others utilize the actual locations of discovery. In this article, the ways sites themselves can be used to tell people about the fascinating revelations and the rich stories derived from archaeological and historical exploration are considered. This is an issue that confronts many archaeologists, including those working at St. Mary's City, the site of Maryland's seventeenth-century capital. Nearly 40 years ago, St. Mary's archaeologists were given the tasks of discovering a vanished city, interpreting it on the original sites, while at the same time endeavoring to preserve most of the unique 350-year old remains. The effort has included many different approaches in exhibiting the sites and called upon experts in a variety of fields to reach the best solutions. This article is not a theoretical treatise, but one that seeks to share the practical experiences obtained from four decades of doing archaeological interpretation.

### 2.2. St. Mary's City

Maryland was founded in 1634 as a proprietary colony owned by an English Catholic noble, Cecil Calvert, Lord Baltimore. Perhaps the most memorable features of the colony are that it established the first official policy of religious freedom in English America and had separation of church and state, both extremely unpopular ideas in the seventeenth century. After a brief period of exploring the Potomac River and establishing peaceful relations with local Piscataway Indian Chieftdom, the settlers purchased a Yaocomico Indian village, moved into the vacated Indian homes and founded Maryland, naming the place St. Mary's City (Carr et al., 1978). St. Mary's became the center of government and the only settlement in the colony during the seventeenth century that displayed an urban

character. Maryland's capital grew slowly at first, with setbacks due to war and rebellion. Growth was most dynamic between ca. 1660 and 1694, when an elaborate Baroque-inspired urban plan was created and major public architecture erected (Miller, 1999). This expansion would have continued, but for a rebellion in 1689 that was inspired by the Glorious Revolution in England. Disgruntled Maryland Protestants rose up against Lord Baltimore, captured St. Mary's City and overthrew the government. England's new monarchs, William and Mary, made Maryland a royal colony. In 1695, Royal Governor Sir Francis Nicholson moved the capital from St. Mary's City with its strong Lord Baltimore association to a Protestant population center—Annapolis (Carr, 1974). Most of the St. Mary's residents followed the government, since it was their chief source of employment, and the original capital was largely abandoned. By the mid-1700s, nearly every above ground trace of the city had vanished under farmland. St. Mary's City remained an undeveloped rural setting into the mid-twentieth century, a circumstance that allowed most of its archaeological sites to remain well preserved under fields and pastures bordering the tranquil St. Mary's river.

Although few above ground clues survived of the city, the citizens of Maryland never forgot the state's founding site. Commemorative events and pilgrimages to St. Mary's began in the early nineteenth century. For the 300th anniversary of the colony's founding in 1934, a huge celebration was held at the site, attended by over 100,000 people (*The Baltimore Sun*, June 17, 1934). The centerpiece of the event was the reconstruction of the 1676 State House, a project that involved limited archaeological investigation. In addition, the festivities included the first public exhibition of the archaeological remains of St. Mary's City. Local citizens uncovered the brick ruins of the seventeenth-century Van Sweringen site, so they could be displayed to visitors during the celebrations (Howard, J Spence Jr, 2004, personal communication). After the ceremonies, the city once again returned to its long slumber. In the 1960s, rapidly increasing development in the area sparked public concern. A group of citizens, led by a retired four-star Marine Corps general, began lobbying for preservation of the state's founding site. In 1966, the Maryland Assembly agreed to create a state museum at the site, and passed legislation that defined the museum's purpose as preserving, studying and interpreting St. Mary's City to the public (Bill 835, Article 41 Annotated Code of Maryland, Acts 1966). This legislation was revised in 1997 with the intention of enhancing the museum's ability to "preserve, protect, and appropriately use the historical and archaeological assets" of the founding site (Education: 24-501 to 24-525, Annotated Code of Maryland 1997). The first question confronting the new museum staff, and one that visitors continue to ask today, is "Where is the City?" Intensive documentary research by staff historian Lois Green Carr found that no maps or good written descriptions of the city survived, and many of the land records burned in a courthouse fire. Only by collecting

archaeological evidence and linking it with the few historical records could the museum hope to discover Maryland's "ancient and chief seat of government."

### 2.3. Discovering the City

The first archaeological investigations of St. Mary's City were conducted in the mid-1930s by architectural historian H. Chandlee Forman, who summarized his findings in a captivating volume entitled *Jamestown and St. Mary's: Buried Cities of Romance* (1938). Only with the founding of the Historic St. Mary's City (HSMC) museum three decades later was attention again given to the rich archaeological heritage of the city. Rescue archaeology began in 1968 and systematic archaeological research began in 1970 under the direction of Garry Wheeler Stone and continues today. The St. Mary's City program is the longest running archaeological research project in Maryland. Labor for this work comes from an annual archaeological field school jointly sponsored by the museum and St. Mary's College of Maryland, paid excavators and volunteers. Funds for the research derive from a variety of sources including state appropriations, federal and private grants, and donations. In 1971, the museum began inviting the public to visit its excavation sites, learn about the research process, and interact directly with archaeologists, initiating the first public archaeology program in the state. Work during the 1970s primarily focused upon individual sites to learn about the nature of the early architecture and landscape, the material culture of seventeenth-century Maryland, and to develop the best methods of collecting and analyzing data from sites of this era. Projects included the Tolle-Tabbs site, a suspected early site that turned out to be an eighteenth-century plantation house, the 1638 St. John's plantation site (Keeler, 1978; Stone, 1982; also see the Chapter 3), and a 1660s government office that Dutch immigrant Garrett Van Sweringen converted into the finest hotel in Maryland (King and Miller, 1987; King, 1990). Later studies explored the ca. 1667 Brick Chapel and its surrounding cemetery (Riordan, 2003), an associated Priests' House, and a 1680s structure used for a time as a printing house.

Between 1979 and 1996, the museum directed major efforts toward archaeological survey and testing to identify all the cultural resources for management purposes and to trace the development of the seventeenth-century capital. Key to this task was finding the center of the original city. We achieved this in 1984 when the Country's House, the ca. 1635 home of the first governor Leonard Calvert, was discovered to lie under and around a 1840s plantation house and its outbuildings (Miller, 1986, 1994). Many seasons of archaeology since then have produced a massive amount of data. While seventeenth-century sites are the main targets for interpretation, excavators also recover vast quantities of prehistoric materials, artifacts from eighteenth-century plantations and quarters, and remains from nineteenth- and twentieth-century farms (cf. Neuwirth, 1997).

## 2.4. Interpreting Seventeenth-Century Sites

What are the methods by which these rich archaeological resources can be presented to the public? Some possibilities have been reviewed in previous publications (cf. Jameson, 1997). Artifacts and summaries of the findings have been presented in traditional gallery exhibits at St. Mary's (Hurry et al., 2001), but the actual sites demand different approaches. For these, our interpretive efforts have ranged from simple signs to full scale reconstructions. Selection of a specific approach is influenced by many factors including the nature of the site and its significance, a desire to preserve as much of the archaeology *in situ* as possible, construction costs, Americans With Disabilities Act (ADA) requirements, staffing needs, the long-term maintenance requirements of an exhibit, and the amount of information each interpretive approach requires to produce a credible exhibit. Perhaps the key issue is the nature and condition of the archaeological remains at a particular site. Some sites offer little of visual interest while others have complex brickwork, cellar holes, shell pits, and other features. The visiting public readily understands brick ruins as architectural remains, in part because this material continues to be used in contemporary construction. But only a few seventeenth-century buildings were made of brick. In early Maryland, the vast majority of the structures were of wooden, post-in-the-ground construction (Carson et al., 1981; Stone, 1982, 2004). If masonry was used on these sites, it was generally in the chimneys. As a result, most colonial structures are indicated by subtle soil discolorations representing postholes and molds that are less than dramatic in appearance and often difficult for visitors with no dirt reading skills to even recognize. After being excavated, the empty holes in the ground are very hard to make exciting. Such sites are a challenge to display. Thus, the nature of the archaeological remains has a central role in determining the best way of presenting a specific site to the public.

Given these factors, HSMC archaeologists have experimented with a variety of exhibit approaches on sites for the past four decades. These include interpreting the architecture and landscape elements, while striving to leave portions of the sites preserved for future generations. Besides simple signs, the approaches are:

1. Stabilizing and partially rebuilding ruins with masonry elements.
2. Wooden outline of building plans and interior fill material.
3. Ghost buildings or three-dimensional wooden outlines.
4. Full reconstruction with variations.
5. Re-creating landscape components.

*Stabilized and Partially Rebuilt Masonry:* A few sites at St. Mary's have masonry elements such as chimneys, footings, or veneer walls. They offer structural elements that may be easily enhanced for interpretation. The building walls can be permanently defined above ground by laying five to ten

courses of new reproduction brick over the original, after taking appropriate precautions to protect the authentic bricks. With chimneys, they can be rebuilt to a height of 5 or 6 ft, thus creating a more three-dimensional interpretation. With internal chimneys, partially rebuilding them also gives a stronger sense of the original room divisions to visitors. Interior ground surfaces may be covered with a distinct material such as pea gravel, mulch, or soil consolidant to better distinguish them from the yard areas. This approach was first used on the Tolle-Tabbs house at St. Mary's City in 1975 (Figure 2.1) , and later employed for the stabilization and exhibition of the Van Sweringen and the Leonard Calvert sites (Miller, 1994), all under the direction of Garry Wheeler Stone. Signs are used to give details about site history and the archaeological findings. Figure 2.2 shows the Van Sweringen site's partially rebuilt brick chimneys and veneer walls using brick custom-made to match the originals. A reconstructed wooden kitchen and cooling house are seen in the background.

Brick walls that are stabilized and partially rebuilt represent the oldest exhibit method used in historical archaeology. It was first employed by Samuel Yonge at Jamestown in 1906 (Yonge, 1907; Cotter, 1958). Later in 1957 at Jamestown, the National Park Service built replicas of many of the brick foundations uncovered by archaeology in the first large-scale application of this method. These rose 1 to 2 ft above the ground surface and were painted white to emphasize that they were not originals. Artists' conjectural

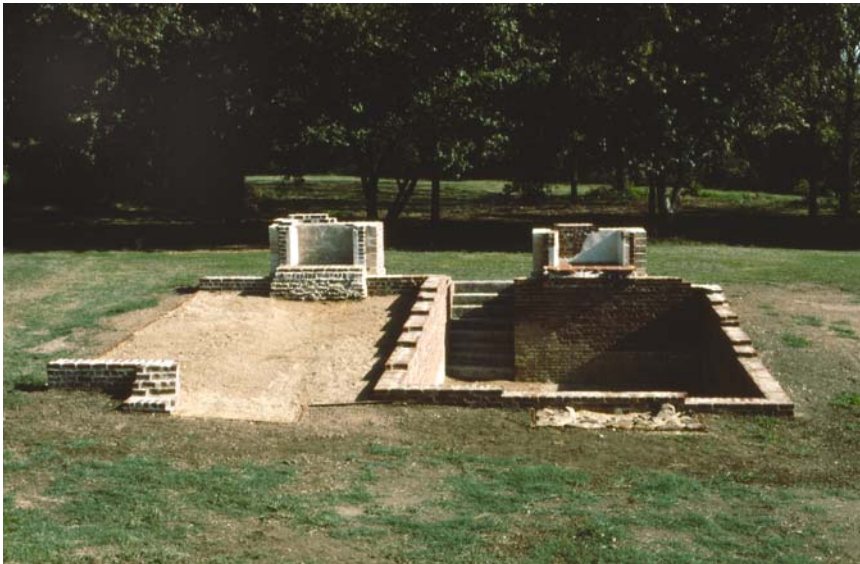


FIGURE 2.1. The stabilized and partially rebuilt brick foundations, chimneys, and cellar of the ca. 1740 Tolle-Tabbs house. (Courtesy of Historic St. Mary's City)





FIGURE 2.2. Partially rebuilt brick veneer and chimney bases of the Van Sweringen site, ca. 1677. Van Sweringen's kitchen and cooling house reconstructions are in the background. (Courtesy of Historic St. Mary's City)

paintings of the structures and informational signage supplemented the replica foundations. Input in designing these exhibits was provided by archaeologists J. C. Harrington, John Cotter, Edward Jelks, and others (Jelks, Edward, 19 May 2004, personal communication). This interpretive method effectively created the appearance of ruins in what was an otherwise undistinguished setting.

Ruins convey romance and fascination in a way that the public responds to and connects with. This is a cultural response reinforced by television and magazine images from places like Egypt, Rome, and Stonehenge. Ruins provide teaching opportunities by sparking interest in the past. Most historic sites in America lack such evocative ruins, but this exhibit approach produces a reasonable simulation. By working with traditional brick makers or commercial firms that can do custom work, accurate reproduction materials may be obtained. To successfully build this type of exhibit, archaeologists must work closely with skilled restoration masons who have the knowledge and ability to lay colonial era bonds. While the cost of obtaining accurate reproduction brick and having them laid authentically can be high, a very durable, and long-lasting exhibit results. The permanence of this exhibit method and the evocative ruins it creates makes it an appropriate interpretive strategy for

some sites. Nevertheless, this stabilization approach also has disadvantages. One is the high-initial cost. Another is that the original brick must be well buried with only reproduction brick used near or above ground level. If the original brick is at or near the surface, it can fragment from repeated freeze-thaw cycles, thereby making the above grade reconstructed walls unstable and potentially dangerous for visitors. If original walls are capped with new brick, the finished grade should be raised well above the original remains so that only reproductions are exposed. There is also a problem that the public tends to see the exhibit bricks as all being original, despite signs clearly indicating that they are reproductions. Equally challenging are visitors, who have a hard time visualizing the connection between the foundations and a standing structure. Adequate signs with good graphics can help overcome this and are a crucial element of this exhibit approach.

Outdoor signs have the advantages of durability, low cost, and low-site impact. Their disadvantages include relatively low-information content, maintenance needs such as weed removal and cleaning the surfaces to remove bird droppings, accidental damage from mowers and vehicles, and gradual fading from long exposure to ultraviolet light. Extensive use of graphics is essential to attract and hold attention, convey information and break up the text into small, quickly read segments. Indeed, good graphics are so crucial that archaeologists should consider the direction and angle from which the public will eventually view a site when taking site photos, especially overall views. With the many daunting demands of conducting an excavation, this is often forgotten but the exhibit potential and need for good images must be considered while the excavation is underway. Obviously, they cannot be taken afterward. Signs are most effective when graphically rich and used as part of a larger site interpretation. By placing them in direct relationship to the exhibited structural remains, the archaeological site and the signs are linked and better understood by visitors.

*Wood Outline of the Building Floor Plan:* Archaeology usually provides reliable information about the location and general dimensions of a structure, even one lacking masonry elements. This evidence can be used to outline the structure's floor plan with 6–8 in. thick timbers laid along the original wall lines. The interior "room" areas are covered with a material such as pea gravel to visually distinguish inside from outside space. Signs then provide the site information. The advantages are very low cost, fair durability, and establishing a clear connection between the archaeological building location and the signs. A major disadvantage of this approach is that it creates an exhibit that some have described as resembling "giant cat litter boxes." While visitors do get a sense of the location and area enclosed by a building, the exhibit is too flat. People have trouble intellectually translating the unfamiliar site plan perspective into an actual structure. Discussions with visitors at HSMC and observation of their reactions shows that people best comprehend a site having a three-dimensional interpretation. Another problem with this floor plan method is that it demands frequent mowing since, even moderately high grass

and other vegetation will rapidly conceal the wall lines. The two-dimensional outline is the least costly approach to site exhibition, but it has proven ineffective and is not recommended, based upon the St. Mary's City experience.

*Ghost Buildings:* Helping visitors understand the vanished built environment uncovered by an archaeological investigation needs other solutions. Fully reconstructing a structure solves this problem very nicely, but it requires a large quantity of information, major excavation of the building remains, and is very costly if done to proper museum standards. How does one go about creating the visual impression of a house site or a city landscape with modest funds, nothing visible above ground, limited evidence about the structures, and the overriding goal of preserving as much of the archaeology as possible? This has been especially challenging at St. Mary's City because the museum has never intended nor had the funds to fully reconstruct the town, as is done at places like Williamsburg. But we still have the obligation of giving visitors a sense of Maryland's first urban setting and allowing them to grasp the scale and layout of the early city in a modern landscape that is mostly old agricultural fields and pasture land.

A solution was inspired by an innovative concept John Cotter and the National Park Service used for the Benjamin Franklin House exhibit in Philadelphia (Stubbs, 1984). This three-dimensional steel outline of Franklin's house suggested a way to present the wooden buildings of St. Mary's City. A variant of this idea was later developed by Ivor Noel Hume and landscape architects Kent Brinkley and Gordon Chappell for the early seventeenth-century settlement of Martins Hundred on the James River in Virginia (Baugher, 2002). In the mid-1980s, they built two-dimensional wooden outlines of the various buildings with one gable being fully defined for each structure. Encouraged by these efforts, I proposed using the full three-dimensional forms at St. Mary's in 1984, but it was 10 years before the funds and permissions could be obtained to try it out. Called ghost frames by the St. Mary's City archaeologists, these wooden outlines are intended to evoke the form of seventeenth-century Chesapeake structures with high-pitched gables, and are supplemented with door and window frames. To create these exhibits, it was necessary to work closely with skilled carpenters, defining the goals for them and laying out a general design concept, while relying upon their knowledge, experience, and advice about wood construction methods. As a state agency, the museum also had to meet a 20-year life expectancy for exhibit structures. To collect the required information, HSMC installed five different prototypes of these wooden frames in 1994 using private funds, and tested them for a number of factors including durability, structural weaknesses, and visitor response. Although these were only prototypes, they inspired other archaeologists to experiment with this method, beginning with a slave quarter at Poplar Forest (Heath, 1997: 188–189). Based upon the knowledge gained from 5 years of weathering and storms, more refined designs were developed in 1999 and 16 new ghost buildings erected in 2000 (Figure 2.3).





FIGURE 2.3. A Ghost building over a late seventeenth-century archaeological site. (Courtesy of Historic St. Mary's City)

Various sizes are built. In some cases, archaeologists fully uncovered a structure so that its exact dimensions are known and these details are employed to construct the ghost building. But archaeological survey and testing have identified many other building sites where the level of investigation is insufficient to reveal the architecture. For those sites that had domestic habitations and date to the ca. 1660–1695 era, a standard model of a house is used. Measuring 20 ft. by 20 ft. with a simulated wattle and daub chimney outline on one gable, this model is based upon 1680s St. Mary's City legislation that required a landowner to build a house of this size to maintain the patent for their lot (Figure 2.3). But not all buildings were houses. The city also contained stables, smoke houses, work sheds, tobacco barns, and other outbuildings. Where archaeology indicates the presence of a ca. 1660–1695 structure that had a nondomestic function, different frames were designed. For example, a stable or tobacco barn is represented by a 15 ft by 30 ft ghost building with a central door, but without a chimney. By using a variety of forms, we can convey something of the architectural diversity the city would have displayed. At the same time, this approach allows us to utilize limited survey level and Phase II test findings and integrate them into a broad city-wide interpretive program.

All these frames are made of pressure-treated wood for durability; the principal timbers assembled using rugged mortise and tenon joints, and the

joint seams filled with caulking to deter water intrusion. Each frame rests slightly above ground level on masonry blocks that are set into the plowzone. They are anchored with rebar driven through the sill and into the ground, causing only a one-half inch intrusion into subsoil. Experience with storms, especially Hurricane Isabel in 2003, demonstrates that such anchoring is essential. Maintenance costs are low, consisting of mowing around and inside the frames, and the application of a preservative to the wood every 5 years. Ghost buildings serve as relatively low-cost visual placeholders, interpreting where buildings once stood without disturbing their preserved archaeological remains. When the need arises in the future to conduct archaeology on a specific building, the wood frame can be moved to the location of another comparable site. Visitor reactions to the ghost buildings are highly favorable, and they specifically state that seeing the building frames gives them a much better understanding of the scale and layout of the city. A similar result is to be expected on a farm or plantation site where a variety of outbuildings can be interpreted in this manner. One caution is needed, however. Since this is a new exhibit idea for visitors, it is necessary to explain the concept to them. Without this, some think the frames are unfinished building projects and they wonder why construction was halted. Nevertheless, this approach is a very cost effective and successful way of utilizing limited archaeological evidence to give visitors a sense of the presence, general form and volume of long-demolished structures.

*Full Reconstruction:* Perhaps the most popular, demanding and costly exhibit approach on archaeological sites is the full reconstruction of a building; for more discussion of this important topic, see Jameson (2004). Reconstruction requires as much evidence about the original structure as possible, which at St. Mary's City means conducting major excavations. There are no paintings, detailed drawings, or architectural plans of seventeenth-century Chesapeake buildings and few written descriptions. Due to the post-in-the-ground construction method that predominated in the Chesapeake, very few buildings have survived centuries of termites and rot (Carson et al., 1981; Stone, 2004). Standing structures that can provide insight are limited to the study of the five surviving seventeenth-century buildings in the region, and precedents derived from surviving structures in England and New England. Archaeology must be the chief means of gathering evidence. Extensive excavations over the past 40 years have revealed that earthfast construction was widely used and the vast majority of the region's structures were built in this way (Stone, 2004). Understanding what these buildings were like requires complex architectural excavation and intensive analysis. Despite the costs and effort, there are many advantages to reconstructions. They provide invaluable interpretative opportunities that cannot be achieved in other ways. Living history demonstrations and presentations on architectural history, decorative arts, and daily life are significantly enhanced with authentic period settings. While ghost buildings can depict the presence of structures, earthfast architecture is not fully understood by

visitors without providing real examples. Indeed, seventeenth-century architecture, living spaces and material needs were so different from those of twenty-first-century America that many people must experience the physical spaces of life to grasp the nature and significance of the cultural distinctions that separate us from the early settlers. For these interpretive reasons, St. Mary's City has reconstructed a few of the original buildings in the city—a public inn dating from 1667, a merchant's storehouse and office, a ca. 1690 kitchen, and a 1680s printing house. Currently, Maryland's first brick building—the 1660s Jesuit chapel—is being meticulously rebuilt after intensive archaeological and architectural research (for information on the Print House and Chapel reconstructions, go to new projects on the HSMC web site ([www.stmaryscity.org](http://www.stmaryscity.org))).

Excavation of the public inn or ordinary as they were called in the early Chesapeake revealed the postholes of a structure that had burned. Artifacts, features and documents identify it as William Smith's Ordinary, built in 1667 and destroyed by fire in March of 1678. Archaeology showed that it had an unusual end-passage plan with a wattle and daub firehood, a rare form of vernacular architecture found mostly in Northern England. Reconstruction required that the archaeologists work closely with architectural historians and period craft specialists to develop the most credible design. In so doing, new questions arose that caused further evaluation of the site's archaeological record in seeking answers. With the help of Plimoth Plantation housewrights and Chesapeake area artisans, this structure was rebuilt in 2000 and 2001 (Figure 2.4). It provides an authentic setting for interpreting one of the main businesses of the city—innkeeping. At the same time, the museum staff assigned to this building use it as a device to discuss archaeological evidence. They do this by describing how the original structure burned to the ground and asking visitors what evidence would be left to find. Interpreters point out a range of clues, from the postholes and melted glass to garbage dumps that indicate door locations. One of the findings that visitors seem especially intrigued by are daub plaster fragments that have wood grain impressions on their backside with a calcium deposit over most of that surface. This deposit is the remains of whitewash. The ordinary's clapboard walls were originally whitewashed on the interior and a daub plaster finish later installed on the clapboard wall during a renovation phase. Our reconstruction represents the original, unaltered building since the archaeological data were strongest for the initial phase, and its walls are therefore left whitewashed. By using the actual site evidence, visitors are more readily brought into the reasoning process behind a reconstruction. As part of this interpretation, the staff points out that many aspects of the building leave no traces for archaeologists to discover. Because of this reality, we note that the exhibit is not a 100% accurate reconstruction, but is only as good as scholarship and the surviving evidence can make it at this time. As an exhibit, Smith's Ordinary is very popular. It not only serves general visitors, but over 30,000 school children each year.



FIGURE 2.4. Reconstruction of Smith's Ordinary (1667–1678) with its fences indicated by archaeology. (Courtesy of Historic St. Mary's City)

There is another variation on reconstruction that HSMC has used. A disadvantage of full reconstruction is that the archaeological evidence of the building usually must be either fully excavated or concealed under the new structure. This deprives visitors of the opportunity to see authentic remains. To overcome this problem, Garry Wheeler Stone used a new approach for the kitchen reconstruction at the Van Sweringen site. Excavators found a small 1670s kitchen that Van Sweringen had enlarged around 1690. Among his improvements was a rare brick floor. This brick floor and the brick chimney base are well preserved. Realizing the exhibit potential of the floor, Garry stopped the excavations and did not dig features under the brick floor, as would have been the normal procedure. After the rest of the earthfast structure was excavated, we analyzed the remains and fully rebuilt the wooden components of the 1690 kitchen, while leaving its interior unfinished. Visitors can view the architecture and learn about earthfast construction while also seeing the seventeenth-century brick floor and chimney base of the kitchen (Figure 2.5). By considering the exhibit potential while digging was underway, it was possible to take advantage of what the site offered to produce a much more powerful exhibit than would have otherwise been the case. While some sites will not have displayable remains like this, where they do exist, this





FIGURE 2.5. The reconstructed Van Sweringen kitchen with its 1690s brick floor displayed to the public. (Courtesy of Historic St. Mary's City)

is a highly effective method that allows visitors to see the original archaeology within its context inside a recreated building. It overcomes a principal drawback of reconstruction for archaeology—hiding most of the original fabric from view. This also provides an evocative experience for visitors. As one person remarked to me at the site, “seeing the brick floor that people actually walked on 300 years ago makes the history real for me.”

## 2.5. Recreating the Landscape without Harming the Archaeology

Interpreting buildings, either with outlines or reconstructions, addresses only one element of a site. The landscape around the structures is equally significant and archaeology retrieves a wide variety of data about this subject. Artifact distributions indicate activity areas and dumps. Excavations reveal the remains of fences, boundary ditches, borrow pits, gardens, orchards, and other site elements. Streets were the physical expression of the urban plan. Although the streets of St. Mary's were never paved, their presence is indicated on aerial photographs as crop marks and by the archaeological evidence of bordering fence lines. Selective depiction of these landscape features

is important to provide the public with the sense of a city. Without landscape elements, the ghost buildings and few reconstructions are disconnected structures that seem to be randomly scattered over a large space. Recreating the yards and fences that linked these buildings and streets into a cultural composition is essential. Our problem is that few of the original landscape features have been fully excavated. Archaeologists only sampled portions of these features, leaving the majority of them still preserved in-place. How could we rebuild the fences without either completely excavating their original remains or seriously disturbing them? The large postholes that are crucial for the stability of seventeenth-century style fences, and the deep trenches between these posts for the pales would have caused much damage to the archaeology. To solve this problem, we developed a new approach. First, instead of setting the bottoms of the wooden pales or pickets into a trench, we left them slightly above the ground, thereby avoiding the digging and greatly extending the lifespan of the fence elements. Since, wandering pigs were a principal reason for a deeply buried fence and they are now less of a problem, we felt this was a reasonable compromise. Next, workers cut durable locust posts and drilled a narrow hole about 18 in. deep into the bottom of them. Into this hole they drove a 3 ft long piece of 3/4th-in. iron rebar, so that half of it was firmly imbedded in the post. Small shallow postholes were then dug every 10 ft along the approximate route of the seventeenth-century paling fence line, but offset slightly from its original location to avoid disturbance of the features. These postholes only extended to the bottom of the plowzone (8–10 in.), so that no cultural features were impacted. We then placed a prepared post with its exposed rebar in the center of this hole and drove it into the ground until the wooden post rested firmly on the bottom of the hole. Backfilling and tamping the soil around the post provided more support. This technique allowed the fences to be rebuilt while leaving nearly all of the landscape archaeology preserved *in situ* for future researchers (see Figure 2.4).

Defining the original streets of the city was another challenge. Their routes were determined by archaeology and the analysis of early aerial photographs, but no traces of these 300-year-old dirt roads remained visible on the surface. The first attempt to define them was made with selective grass mowing, keeping the “streets” at a lower level than the surrounding areas. While it provided a useful visual contrast, this method proved difficult to maintain, the intent was not always clear to the visitors and it did not satisfy ADA requirements. A permanent surface of some type was needed over what were originally unpaved colonial streets. Unfortunately, typical paving does not look natural and it normally requires that topsoil be removed down to a suitable subgrade surface. Given the amount of unexcavated archaeology in St. Mary’s City and our preservation responsibilities, cutting away long swaths of plowzone through the city for this purpose was simply not acceptable. Mitigation of these long linear areas by plowzone excavation would be prohibitively expensive. Instead of taking this approach, the museum’s historical horticulturalist,



Mary Alves, and I began working directly with engineers and paving specialists to seek an alternative. Initially, the engineers were highly resistant to any approach that did not involve grading. Topsoil was the enemy of a durable paved surface, since it was unstable and “nobody builds streets like that.” Only after much discussion and repeatedly emphasizing why we did not want to grade away the topsoil was an alternative developed. Rather than grading away the topsoil, the land surface would be left intact with the vegetation first killed off by applying herbicides. Next, workers rolled the intended route of the street to compact the soil. A layer of geofabric was laid directly on this surface along the route of the “street” and layers of gravel fill were placed over it. These fill layers were also compacted by rolling. Then a 4-in. thick layer of asphalt was applied with a paving machine over the 10 ft street width. During this process, the machine operator was given instructions to not drive straight, as is normal, but to regularly wiggle the machine to better reproduce the irregular edges of a dirt road. This proved one of the hardest parts of the entire operation because the driver had trouble understanding why those weird archaeologists did not want a good straight road.

There was still the problem of making the asphalt not look like asphalt. As part of the planning for this effort, we conducted experiments by laying down different grades of asphalt, trying to determine which yielded the best “dirt road” appearance. This revealed that the most coarse grade available had the desired effect. Finally, the problem was how to hide the black color? We resolved this by coating the new “street” with a special acrylic polymer called the *StreetBond* surfacing system, developed especially for asphalt. To create a color that would accurately simulate a seventeenth-century dirt road, I collected samples of the natural topsoil in the area and determined their precise color. The *StreetBond* fluid was then manufactured to this exact specification and applied over the black asphalt, fully masking it. Afterward, topsoil was added to the road edges to create smooth, gently sloping shoulders and we planted grass to stabilize the soil. The result is a hard, permanent pedestrian surface that simulates the appearance and routes of the original streets of the city, meets all ADA requirements, and blends into the outdoor setting (see Figure 2.6). Drawbacks are that very heavy vehicles such as dump trucks cannot drive over the paving without laying down protective shielding (due to its shallow depth), rubber-tired vehicles can occasionally cause scuffing of the surface, and the acrylic needs to be reapplied approximately once every decade. But despite the misgivings of the engineers, the surface has proven durable without significant cracking or other damage in the 6 years since the “streets” were recreated, and visitors absolutely like it.

Through these efforts, some semblance of the seventeenth-century landscape in the center of the city has been recreated and the structures integrated into a more urban setting. From the center of the town square, visitors can finally see the radiating street network, inspired by Baroque design concepts (Miller, 1999), and revealed by archaeology. They can also grasp the spatial plan and scale of Maryland’s first city. At the same time, nearly 90% of the



FIGURE 2.6. A recreated seventeenth-century street at St. Mary's City with signs and other exhibits. This street leads to the 1660s Brick Chapel that is being reconstructed. (Courtesy of Historic St. Mary's City)

archaeology of this early community is still preserved under the feet of passing visitors, leaving ample opportunity for future generations to conduct their own explorations and derive new interpretations of Maryland's seventeenth-century capital.

## 2.6. Conclusions

The experiences of St. Mary's City encompass many ways of interpreting historic period sites. Appropriate methods vary by site, and monitoring of visitor reactions shows that some methods are more effective than others. Indeed, each site possesses its own unique potentials for interpretation. The best exhibits on sites are created by combining the skills and ideas of specialists from many different fields, with the archaeologist playing a key creative role. When the fieldwork and analysis are completed, the process of converting the archaeological discoveries into exhibits must receive sufficient attention and thought. Only by partnering with experts in varied fields (history, architectural history, engineering, masonry, landscaping, exhibit design, lighting, carpentry, etc.) can the best exhibit possibilities be realized. Ideas, alternative approaches and unrealized possibilities are all raised through this

collaborative process of exhibit conceptualization, design, and installation. But it is the archaeologists who have the most comprehensive understanding of the site, its resources, and its meanings. They must have a central role in the creative development of the exhibit so that the potential of the site as a teaching tool is most fully realized with the available resources.

Important archaeological discoveries and new insights are the result of hard physical work and intellectual toil. Reports and collections are the crucial and indispensable products that possess enduring value. But it is through the inspired translation of these findings into effective, long-lasting exhibits that the greatest direct public benefit is achieved and people learn about their past through archaeology.

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